

Amendments to the Claims:

Please cancel claims 15 - 22 without prejudice or disclaimer of the subject matter contained therein and add the following new claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 2 (canceled)

Claims 3 - 14 (canceled)

Claims 15 - 22 (canceled)

23. (new) A plasma processing apparatus for processing a specimen disposed within a vacuum chamber by using plasma formed within the vacuum chamber, comprising:

a stage which is disposed within the vacuum chamber and which includes a cooling jacket provided at an inside thereof with a path for passing coolant liquid therethrough, and an upper member which is attached on the cooling jacket and has a heater disposed at an inside thereof, the specimen being placed on the upper member, and the plasma being formed in a space above the specimen;

a first gap which is disposed at an area on a center portion of the stage between the cooling jacket and the upper member, a second gap which is disposed at an area on an outer peripheral portion of the stage between the cooling jacket and the upper member, each of the first and second gaps being sealed at an inside thereof; and

first and second valves for supplying heat transfer gas within each of the first and second gaps, respectively, so as to enable a pressure of the gas supplied within the first gap to be different from a pressure of the gas supplied within the second gap.

24. (new) A plasma processing apparatus according to claim 23, wherein the pressure of the gas within the first gap and the pressure of the gas within the second gap is independently adjusted by the first and second valves.

25. (new) A plasma processing apparatus according to claim 23, further comprising:

a first inlet port disposed at the first gap and coupled to a first inlet valve for introducing the gas thereinto;

a first outlet port disposed at the first gap and coupled to a first outlet valve for exhausting the gap therefrom;

a second inlet port disposed at the second gap and coupled to a second inlet for introducing the gas thereinto; and

a second outlet port disposed at the second gap and coupled to a second outlet valve for exhausting the gas therefrom.

26. (new) A plasma processing apparatus according to claim 24, further comprising:

a first inlet port disposed at the first gap and coupled to a first inlet valve for introducing the gas thereinto;

a first outlet port disposed at the first gap and coupled to a first outlet valve for exhausting the gap therefrom;

a second inlet port disposed at the second gap and coupled to a second inlet for introducing the gas thereinto; and

a second outlet port disposed at the second gap and coupled to a second outlet valve for exhausting the gas therefrom.

27. (new) A plasma processing apparatus according to claim 23, wherein the heater includes a first heater section which is provided on the center portion of the stage within the upper member, and a second heater section which is provided on the outer peripheral portion of the stage within the upper member and which is separately provided from the first heater section.

28. (new) A plasma processing apparatus according to claim 24, wherein the heater includes a first heater section which is provided on the center portion of the stage within the upper member, and a second heater section which is provided on the outer peripheral portion of the stage within the upper member and which is separately provided from the first heater section.

29. (new) A plasma processing apparatus according to claim 25, wherein the heater includes a first heater section which is provided on the center portion of the stage within the upper member, and a second heater section which is provided on the outer peripheral portion of the stage within the upper member and which is separately provided from the first heater section.

30. (new) A plasma processing apparatus according to claim 26, wherein the heater includes a first heater section which is provided on the center portion of the stage within the upper member, and a second heater section which is provided on the outer peripheral portion of the stage within the upper member and which is separately provided from the first heater section.

31. (new) A plasma processing apparatus according to claim 27, further comprising:

an adjusting unit which independent adjusts amounts of electric power supplied to the first and second heater sections.

32. (new) A plasma processing apparatus according to claim 28, further comprising:

an adjusting unit which independently adjusts amounts of electric power supplied to the first and second heater sections.

33. (new) A plasma processing apparatus according to claim 29, further comprising:

an adjusting unit which independently adjusts amounts of electric power supplied to the first and second heater sections.

34. (new) A plasma processing apparatus according to claim 30, further comprising:

an adjusting unit which independently adjusts amounts of electric power supplied to the first and second heater sections.